

# PHILLIP EVAN GANDER

Curriculum Vitae

29 March, 2017

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1800 JPP  
Department of Neurosurgery  
University of Iowa  
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## EDUCATION

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- 2009      **PhD** – Psychology, Neuroscience and Behaviour  
            McMaster University  
            Dissertation: Attention and Neural Plasticity in Human Auditory Cortex  
            Supervisor: Prof LE Roberts
- 2002      **BA (Hon)** – Major Cognitive Science, Major Psychology  
            Simon Fraser University  
            Thesis: Electrophysiological Evidence for Selective Target Processing in Visual  
            Search  
            Supervisor: Prof JJ McDonald

## ACADEMIC POSITIONS

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- 2016-present    **Assistant Research Scientist**, Human Brain Research Lab, University of Iowa
- 2012-2016      **Post-doctoral Research Scholar**, Human Brain Research Lab, University of Iowa
- 2009-2012      **Post-doctoral Research Fellow**, National Biomedical Research Unit in Hearing,  
                    University of Nottingham

## PUBLICATIONS (23)

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### REFEREED JOURNAL ARTICLES

Husain FT, Jensen JN, Shen S, **Gander PE** (in press) Expectations for tinnitus treatment and outcomes: A survey study of audiologists and patients. *J Am Acad Audiol*.

- Kikuchi Y, Attaheri A, Wilson B, Rhone AE, Nourski KV, **Gander PE**, Kovach CK, Kawasaki H, Griffiths TD, Howard III MA, Petkov CI (in press) Nonsense word sequences elicit comparable nested oscillations in intracranial recordings from human and monkey auditory cortex. *PLoS Biol.*
- Davies J, **Gander PE**, Hall DA (in press) Investigating the effects of chronic tinnitus on emotional sound processing: a sound-evoked fMRI study. *Front Auditory Cog Neurosci.*
- Kumar S, Tansley-Hancock O, Sedley W, Winston JS, Callaghan MF, Allen M, Cope TE, **Gander PE**, Bamiou DE, Griffiths TD (2017) The brain basis for misophonia. *Current Biology*, 27:527-533.
- Sedley W, Friston K, **Gander PE**, Kumar S, Griffiths TD (2016) An integrative tinnitus model based on sensory precision. *Trends Neurosci.*, 39:799-812.
- Kumar S, Joseph S, **Gander PE**, Barascud N, Halpern AR, Griffiths TD (2016) A brain system for auditory working memory. *J Neurosci*, 36:4492-4505.
- Sedley W, **Gander PE**, Kumar S, Kovach CK, Oya H, Kawasaki H, Howard III MA, Griffiths TD (2016) Neural signatures of perceptual inference. *eLife*, 5:e11476.
- Kovach CK, **Gander PE** (2016). The demodulated band transform. *J Neurosci Methods* 261:135-154.
- Roberts LE, Bosnyak DJ, Bruce IC, **Gander PE**, Paul BT (2015) Evidence for differential modulation of primary and nonprimary auditory cortex by forward masking in tinnitus. *Hearing Research* 327:9-27.
- Sedley W, **Gander PE\***, Kumar S, Oya H, Kovach CK, Nourski KV, Kawasaki H, Howard III MA, Griffiths TD (2015) Intracranial mapping of a cortical tinnitus system using residual inhibition. *Current Biology*, 25:1208-1214. **\* Joint first authorship.**
- Hoare DJ, Edmondson-Jones M, **Gander PE**, Hall DA (2014) Agreement and reliability of tinnitus loudness matching and pitch likeness rating. *PLoS One* 9:e114553.
- Davies J, **Gander PE**, Andrews M, Hall DA. (2014) Auditory network connectivity in tinnitus patients: a resting-state fMRI study. *International Journal of Audiology* 53:192-198.
- Hoare DJ, **Gander PE**, Collins L, Smith S, Hall DA (2012) Management of tinnitus in English NHS audiology departments: an evaluation of current practice. *Journal of Evaluation in Clinical Practice* 18:326-334.
- Gander PE**, Hoare DJ, Collins L, Smith S, Hall DA (2011) Tinnitus referral pathways within the NHS: a survey of their perceived effectiveness among audiology staff. *BMC: Health Services Research* 11:162.
- El-Shunnar SK, Hoare DJ, Smith S, **Gander PE**, Kang S, Fackrell K, Hall DA (2011) Primary care for tinnitus: practice and opinion among GPs in England. *Journal of Evaluation in Clinical Practice* 17:684-692.
- Gander PE**, Bosnyak DJ, Roberts LE (2010) Evidence for modality-specific but not frequency-specific modulation of human primary auditory cortex by attention. *Hearing Research* 268:213-226.
- Gander PE**, Bosnyak DJ, Roberts LE (2010) Acoustic experience but not attention modifies neural population phase expressed in human primary auditory cortex. *Hearing Research* 269:81-94.

## BOOK CHAPTERS

- Irwin A, **Gander PE**, Hall DA (2013) Chapter 10 Listening to emotion: Auditory processing and the amygdala (pp 255-276). In: *Insights into the amygdala: structure, functions and implications for disorders*. Nova Science Publishers: Hauppauge NY.

## CONFERENCE PROCEEDINGS

**Gander PE**, Bosnyak DJ, Wolek R, Roberts LE (2007) Modulation of the 40-Hz auditory steady state response by attention during acoustic training. *International Congress Series* 1300:37-40.

Bosnyak DJ, **Gander PE**, Roberts LE (2007) Does auditory discrimination training modify representations in both primary and secondary auditory cortex? *International Congress Series* 1300:25-28.

Bosnyak DJ, **Gander PE**, Stevens S, Roberts LE (2007) Phase dynamics in the 40Hz auditory steady state response. *International Congress Series* 1300:29-32.

## MAGAZINE ARTICLES

**Gander PE**, Davies J (2012) How to help residents who are troubled with tinnitus. *Nursing and Residential Care* 14:348-351.

**Gander PE**, Hall DA (2012) Understanding the tinnitus brain at rest. *ENT and Audiology News*.

Hall DA, **Gander PE** (2009) Nottingham re-establishes itself as a UK centre for tinnitus research. *Quiet: Quarterly magazine of The British Tinnitus Association*. Autumn issue.

## MANUSCRIPTS SUBMITTED

Kikuchi Y, Kumar S, Baumann S, Overath T, **Gander PE**, Griffiths TD, Petkov CI (submitted) Local field potentials and single-unit activity associated with pitch perceptions in macaque auditory cortex.

## MANUSCRIPTS IN PREPARATION

**Gander PE**, Kumar S, Sedley W, Nourski KV, Oya H, Kawasaki H, Howard III MA, Griffiths TD (in prep) Direct electrophysiological recording of human auditory cortex responses to different pitch values.

Oya H, **Gander PE**, Adolphs R, Petkov CI, Nourski KV, Kawasaki H, Howard III MA, Griffiths TD (in prep) Neural phase-locking predicts BOLD response in the human auditory cortex.

## GRANTS AND AWARDS

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2011	Deafness Research UK Pauline Ashley Prize, £5,000
2011	Building Experience and Skills Travel Scholarship, University of Nottingham, £2,000
2010	Young Investigator Travel Award, Universitat Konstanz, €1,000
2007	Ontario Graduate Scholarship in Science and Technology, McMaster University \$15,000
2006	Canadian Association for Neuroscience Young Scientist Award, \$300
2006	Yates Travel Scholarship, McMaster University, \$500
2002	NSERC Undergraduate Student Research Award, Simon Fraser University, \$5,700
1997	British Columbia Provincial Scholarship, \$1,000

## INVITED TALKS (19)

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- Gander PE** (2017, February) Direct electrophysiological recording of human auditory cortex responses to different pitch values. Presentation at the Association for Research in Otolaryngology conference, Baltimore, USA.
- Gander PE** (2016, September) Human neuroimaging of tinnitus. Presentation at the World Congress of Audiology conference, Vancouver, Canada.
- Gander PE** (2016, June) Tinnitus and its effects in the brain. Presentation at the University of Iowa Conference on the Management of the Tinnitus and Hyperacusis Patient conference, Iowa City, USA.
- Gander PE, Kumar S, Nourski KV, Oya H, Kawasaki MA, Howard MA, Griffiths TD** (2015, November) Direct recordings of oscillatory activity in the human auditory cortex during working memory for tones. Symposium presentation at the Society for Neuroscience conference, Chicago, USA.
- Gander PE, Sedley W, Kumar S, Oya H, Kovach CK, Nourski KV, Kawasaki H, Howard III MA, Griffiths TD** (2015, June) Intracranial mapping of a cortical tinnitus system using residual inhibition. Paper presented at the Tinnitus Research Initiative conference, Ann Arbor, USA.
- Gander PE** (2015, January) Current concepts in tinnitus: can they be translated into practice? Invited lecture at the National Centre for Audiology Seminar, University of Western Ontario, London, Canada.
- Gander PE** (2015, January) Current concepts in tinnitus: can they be translated into practice? Invited lecture at the ENT Grand Rounds, University of Western Ontario, London, Canada.
- Gander PE** (2014, September) Multimodal imaging of auditory working memory for tones. Invited lecture at the Department of Speech and Hearing Science, University of Illinois at Urbana-Champaign, Urbana, USA.
- Gander PE** (2014, February) Direct electrophysiological recording of human auditory cortex responses to different pitch values. Paper presented at the Association for Research in Otolaryngology conference, San Diego, USA.
- Gander PE** (2013, October) Brain imaging in tinnitus: navigating the minefield of positive and negative results. Invited lecture at the Tinnitus Symposium, University of Illinois at Urbana-Champaign, Urbana, USA.
- Gander PE** (2012, September) Pauline Ashley Prize research summary: Resting state fMRI analyses in tinnitus. Invited presentation at the British Society of Audiology conference, Nottingham, UK.
- Gander PE** (2011, October) Relationship between characteristics of tinnitus patients and hearing aid treatment outcome. Invited lecture at the Beckman Institute for Advanced Science and Technology at the University of Illinois at Urbana-Champaign, Urbana, USA.
- Gander PE, Hall DA** (2011, September) Relationship between characteristics of tinnitus patients and hearing aid treatment outcome. Paper presented at the British Society of Audiology conference, Nottingham, UK.
- Gander PE, Hoare DJ, Smith S, Collins L, Hall DA** (2010, September) NHS tinnitus provision: A survey of Audiology departments across England. Invited lecture at the British Tinnitus Association conference, Sheffield, UK.

- Gander PE**, Hoare DJ, Smith S, Collins L, Hall DA (2010, September) NHS tinnitus provision: A survey of Audiology departments across England. Invited lecture at the Hearbuy Ltd conference, Sutton Coldfield, UK.
- Gander PE** (2010, April) Attention modulates the amplitude and experience the phase of the 40-Hz auditory steady state response. Paper presented at the Changing People Changing Brains conference, Konstanz, Germany.
- Gander PE** (2010, March) Effects of training and attention on auditory evoked potentials. Invited lecture at the Institute for Sounds and Vibration Research, Southampton, UK.
- Gander PE**, Hoare DJ, Hall DA (2010, February) A survey of tinnitus service provision in English Audiology Departments. Paper presented at the British Association of Audiovestibular Physicians conference, Nottingham, UK.
- Gander PE**, Bosnyak DJ, Roberts LE (2009, June) The 40-hz auditory steady-state response in tinnitus and residual inhibition: effect of centre frequency of masking and probe sounds. Paper presented at the 3<sup>rd</sup> Tinnitus Research Initiative conference, Stresa, Italy.

### **CONFERENCE PRESENTATIONS, AS PRESENTER (28)**

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- Gander PE**, Kumar S, Nourski KV, Oya H, Kawasaki MA, Howard MA, Griffiths TD (2016, November) Direct human electrical recordings demonstrating fundamental bases for auditory figure-ground analysis. Poster presented at the Society for Neuroscience conference, San Diego, USA.
- Gander PE**, Sedley W, Kumar S, Oya H, Kovach CK, Nourski KV, Kawasaki MA, Howard MA, Griffiths TD (2016, March) Involvement of parahippocampus in tinnitus percept. Poster presented at the Tinnitus Research Initiative conference, Nottingham, UK.
- Gander PE**, Kumar S, Nourski KV, Oya H, Kawasaki MA, Howard MA, Griffiths TD (2016, February) Direct recordings of oscillatory activity in the human auditory cortex during working memory for tones. Poster presented at the Association for Research in Otolaryngology conference, San Diego, USA.
- Kumar S, Joseph S, **Gander PE**, Barascud N, Halpern AR, Griffiths TD (2015, November) A brain system for auditory working memory. Poster presented at the Society for Neuroscience conference, Chicago, USA.
- Kumar S, Joseph S, **Gander PE**, Barascud N, Halpern AR, Griffiths TD (2015, November) A brain system for auditory working memory. Poster presented at the Advances and Perspectives in Auditory Neuroscience conference, Chicago, USA.
- Gander PE**, Kumar S, Nourski KV, Oya H, Kawasaki MA, Howard MA, Griffiths TD (2015, November) Direct recordings of oscillatory activity in the human auditory cortex during working memory for tones. Poster presented at the Advances and Perspectives in Auditory Neuroscience conference, Chicago, USA.
- Gander PE**, Kumar S, Nourski KV, Oya H, Kawasaki MA, Howard MA, Griffiths TD (2015, February) Direct electrical recordings of neural activity related to auditory figure-ground segregation in the human auditory cortex. Poster presented at the Association for Research in Otolaryngology conference, Baltimore, USA.

- Gander PE**, Kumar S, Nourski KV, Oya H, Kawasaki MA, Howard MA, Griffiths TD (2014, November) Direct recordings of sustained theta-band electrical activity in the human auditory cortex during working memory for tones. Poster presented at the Society for Neuroscience conference, Washington DC, USA.
- Sedley W, **Gander PE**, Kumar S, Oya H, Kovach CK, Nourski KV, Kawasaki MA, Howard MA, Griffiths TD (2014, November) Direct mapping of the cortical tinnitus network. Poster presented at the Society for Neuroscience conference, Washington DC, USA.
- Kumar S, **Gander PE**, Nourski KV, Oya H, Kawasaki MA, Howard MA, Griffiths TD (2014, November) Direct electrical recordings of neural activity related to auditory figure-ground segregation in the human auditory cortex. Poster presented at the Society for Neuroscience conference, Washington DC, USA.
- Sedley W, **Gander PE**, Kumar S, Oya H, Kovach CK, Nourski KV, Kawasaki MA, Howard MA, Griffiths TD (2014, September) Direct mapping of the cortical tinnitus network. Poster presented at the Auditory Cortex conference, Magdeburg, Germany.
- Kumar S, **Gander PE**, Joseph S, Halpern AR, Husain M, Nourski KV, Oya H, Kawasaki MA, Howard MA, Griffiths TD (2014, September) Haemodynamic pattern analysis and direct electrical recording of human brain activity during working memory for tones. Poster presented at the Auditory Cortex conference, Magdeburg, Germany.
- Sedley W, **Gander PE**, Oya H, Kawasaki MA, Howard MA, Griffiths TD (2014, February) Direct human recordings of dynamic tinnitus correlates. Poster presented at the Association for Research in Otolaryngology conference, San Diego, USA.
- Gander PE**, Kumar S, Nourski KV, Howard MA, Griffiths TD (2013, November) Human depth electrode recording of auditory cortex responses to different pitch values. Poster presented at the Society for Neuroscience conference, San Diego, USA.
- Gander PE**, Kumar S, Nourski KV, Howard MA, Griffiths TD (2013, November) Human depth electrode recording of auditory cortex responses to different pitch values. Poster presented at the Advances and Perspectives in Auditory Neurophysiology conference, San Diego, USA.
- Gander PE**, Kumar S, Nourski KV, Howard MA, Griffiths TD (2012, October) Human depth electrode recording of auditory cortex responses to different pitch classes. Poster presented at the Advances and Perspectives in Auditory Neurophysiology conference, New Orleans, USA.
- Gander PE**, Kang S, Hall DA (2011, September) How do the psychological and psychoacoustic characteristics of tinnitus patients and non-patients relate to tinnitus distress? Poster presented at the British Society of Audiology conference, Nottingham, UK.
- Gander PE**, Hoare DJ, Collins L, Smith S, Hall DA (2010, September) A survey of Audiology departments across England: Tinnitus assessment, treatment and outcome measures. Poster presented at the British Society of Audiology conference, Manchester, UK.
- Gander PE**, Bosnyak DJ, Roberts LE (2009, September) Attention modulates the amplitude and experience the phase of the 40-Hz auditory steady state response. Poster presented at the British Society of Audiology Short Papers conference, Southampton, UK.
- Gander PE**, Bosnyak DJ, Roberts LE (2008, June) Modality-specific selective attention to simultaneous auditory and visual events. Poster presented at the Society for Neuroscience conference, Washington DC, USA.
- Gander PE**, Bosnyak DJ, Roberts LE (2008, June) Modality-specific selective attention to simultaneous auditory and visual events. Poster presented at the Canadian Society of Brain, Behaviour, and Cognitive Science conference, London, Canada.

- Gander PE**, Bosnyak DJ, Roberts LE (2007, November) A test for frequency-specific modulation of primary auditory cortex by attention, using the 40-Hz auditory steady state response. Poster presented at the Society for Neuroscience conference, San Diego, USA.
- Gander PE**, Bucarelli DA, Bosnyak DJ, Roberts LE (2007, May) An investigation of the frequency selectivity of attentional modulation of primary auditory cortex. Poster presented at the Canadian Association for Neuroscience conference, Toronto, Canada.
- Gander PE**, Bosnyak DJ, Wolek R, Roberts LE (2006, October) Modulation of the 40-Hz auditory steady state response by attention during acoustic training. Poster presented at the Society for Neuroscience conference, Atlanta, USA.
- Gander PE**, Bosnyak DJ, Wolek R, Roberts LE (2006, August) Modulation of the 40-Hz auditory steady state response by attention during acoustic training. Paper presented at the International Conference on Biomagnetism, Vancouver, Canada.
- Gander PE**, Bosnyak DJ, Wolek R, Roberts LE (2005, July) Attentional modulation of the 40-Hz auditory steady state response and other auditory evoked potentials during acoustic training. Poster presented at the Canadian Society of Brain, Behaviour, and Cognitive Science conference, Montreal, Canada.
- Gander PE**, Bosnyak DJ, Wolek R, Roberts LE (2005, June) Attentional modulation of the auditory steady state response and other AEPs during acoustic training. Paper presented at the Lake Ontario Auditory Neuroscience conference, Hamilton, Canada.
- Gander PE**, Visser TAW, McDonald JJ, DiLollo V (2002, May) Electrophysiological evidence for selective target processing in visual search. Poster presented at the North West Cognition and Memory conference, Burnaby, Canada.

## CONFERENCE PRESENTATIONS, AS CO-AUTHOR (38)

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- Choi I, Emory C, Kim S, **Gander PE** (2017, February) Selective attention ability explains variance of speech-in-noise understanding performance in cochlear implant users. Presentation at the Association for Research in Otolaryngology conference, Baltimore, USA.
- Griffiths TD, Chait M, Choi I, Dheerendra P, **Gander PE**, Kumar S, Teki S (2017, February) Figure-ground analysis based on the sequential grouping of spectral patterns. Presentation at the Association for Research in Otolaryngology conference, Baltimore, USA.
- Billig AJ, Rhone AE, **Gander PE**, Nourski KV, Wild CJ, Howard III MA, Johnsrude IS (2017, February) Intracranial recordings reveal modulation of primary auditory cortical activity during pop-out of degraded speech based on matching visual information. Poster presented at the Association for Research in Otolaryngology conference, Baltimore, USA.
- Kim S, Griffiths TD, **Gander PE**, Choi I (2017, February) Neural correlates of variance in speech-in-noise understanding performance. Poster presented at the Association for Research in Otolaryngology conference, Baltimore, USA.
- Billig AJ, Rhone AE, **Gander PE**, Nourski KV, Howard III MA, Johnsrude IS (2016, November) Auditory streaming of speech: acoustics, lexicality and neural signatures. Poster presented at the Advances and Perspectives in Auditory Neuroscience conference, San Diego, USA.
- Billig AJ, Rhone AE, **Gander PE**, Nourski KV, Wild CJ, Howard III MA, Johnsrude IS (2016, August) Intracranial recordings reveal modulation of high gamma activity in primary auditory cortex during speech pop-out. Poster presented at the Society for the Neurobiology of Language conference, London, UK.

- Davies J, **Gander PE**, Hall DA (2016, March) Does chronic tinnitus alter the emotional response function of the amygdala?: A sound-evoked fMRI study. Presentation at the Tinnitus Research Initiative conference, Nottingham, UK.
- Husain FT, Jensen JN, Shen S, **Gander PE** (2016, March) Using regression modeling of survey data to better understand expectations of tinnitus by audiologists and patients. Presentation at the Tinnitus Research Initiative conference, Nottingham, UK.
- Sedley W, **Gander PE**, Kumar S, Oya H, Kawasaki H, Howard III MA, Griffiths TD (2015, November) Neural signatures of predictive coding in cortical pitch processing. Poster presented at the Society for Neuroscience conference, Chicago, USA.
- Kikuchi Y, Attaheri A, Wilson B, Rhone AE, Nourski KV, **Gander PE**, Kovach CK, Kawasaki H, Griffiths TD, Howard III MA, Petkov CI (2015, November) Nonsense word sequences elicit comparable nested oscillations in intracranial recordings from human and monkey auditory cortex. Symposium presentation at the Society for Neuroscience conference, Chicago, USA.
- Sedley W, **Gander PE**, Kumar S, Kovach CK, Oya H, Kawasaki H, Howard III MA, Griffiths TD (2015, November) Neural signatures of predictive coding in cortical pitch processing. Poster presented at the Advances and Perspectives in Auditory Neuroscience conference, Chicago, USA.
- Kikuchi Y, Attaheri A, Wilson B, Rhone AE, Nourski KV, **Gander PE**, Kovach CK, Kawasaki H, Griffiths TD, Howard III MA, Petkov CI (2015, November) Nonsense word sequences elicit comparable nested oscillations in intracranial recordings from human and monkey auditory cortex. Poster presented at the Advances and Perspectives in Auditory Neuroscience conference, Chicago, USA.
- Hoare DJ, **Gander PE**, Collins L, Smith S, Hall DA (2010, November) A survey of Audiology departments across England: Referral pathways. Poster presented at the British Academy of Audiology conference, Edinburgh, UK.
- El-Shunnar S, Hoare DJ, **Gander PE**, Smith S, Hall DA (2010, November) A National Survey of Tinnitus Management in Primary Care. Poster presented at the British Academy of Audiology conference, Edinburgh, UK.
- Hall DA, Hoare DJ, **Gander PE**, Smith S, Collins L (2010, November) NHS tinnitus provision: A survey of Audiology departments across England. Invited lecture at the Tinnitus and Communication Information Event hosted by the RNID, Belfast, UK.
- Hoare DJ, **Gander PE**, Collins L, Smith S, Hall DA (2010, September) A survey of Audiology departments across England: Referral pathways. Poster presented at the British Society of Audiology conference, Manchester, UK.
- Gander PE**, Hoare DJ, Smith S, Collins L, Hall DA (2010, June) A survey of Audiology departments across England: Tinnitus assessment, treatment and outcome measures. Poster presented at the 4<sup>th</sup> Tinnitus Research Initiative conference, Dallas, USA.
- Hoare DJ, **Gander PE**, Collins L, Smith S, Hall DA (2010, June) A survey of Audiology departments across England: Referral pathways. Poster presented at the 4<sup>th</sup> Tinnitus Research Initiative conference, Dallas, USA.
- Bosnyak DJ, **Gander PE**, Roberts LE (2009, June) Electrophysiological assessment of training outcomes using simultaneously evoked transient and steady-state responses. Paper presented at the 3<sup>rd</sup> Tinnitus Research Initiative conference, Stresa, Italy.
- Roberts LE, **Gander PE**, Bosnyak DJ (2009, June) Induction of neural plasticity by auditory training. Paper presented at the 3<sup>rd</sup> Tinnitus Research Initiative conference, Stresa, Italy.



- Roberts LE, Bosnyak DJ, **Gander PE** (2008, November) The 40-Hz auditory steady-state response in tinnitus tracks age-related deficits in intracortical inhibition but does not follow the tinnitus percept. Poster presented at the annual meeting of the Society for Neuroscience conference, Washington DC, USA.
- Bosnyak DJ, **Gander PE**, Roberts LE (2008, June) Does the amplitude of the 40-Hz auditory steady-state response track the tinnitus percept? Poster presented at the Canadian Society of Brain, Behaviour, and Cognitive Science conference, London, Canada.
- Roberts LE, Bosnyak DJ, **Gander PE** (2008, June) Attention modulates the amplitude and experience the phase of the 40-Hz auditory steady state response. Poster presented at the Canadian Society of Brain, Behaviour, and Cognitive Science conference, London, Canada.
- Roberts LE, Bosnyak DJ, **Gander PE** (2008, June) Implications of evidence for remodeling of human auditory cortex for sensory training in tinntus. Paper presented at the 9<sup>th</sup> International Tinnitus Seminars, Goteborg, Sweden.
- Bosnyak DJ, **Gander PE**, Roberts LE (2008, June) Does the amplitude of the 40-Hz auditory steady-state response track the tinnitus percept? Poster presented at the 9<sup>th</sup> International Tinnitus Seminars, Goteborg, Sweden.
- Bosnyak DJ, **Gander PE**, Roberts LE (2007, November) Phase dynamics of the 40-Hz auditory steady state response. Poster presented at the Society for Neuroscience conference, San Diego, USA.
- Roberts LE, Bosnyak DJ, **Gander PE** (2007, November) Attention modulates the amplitude and experience the phase of the 40-Hz auditory steady state response. Poster presented at the Society for Neuroscience conference, San Diego, USA.
- Bosnyak DJ, Leone AM, **Gander PE**, Roberts LE (2007, May) Responses in the primary auditory cortex in tinnitus sufferers after introduction of residual inhibition by masking sounds. Poster presented at the Canadian Association for Neuroscience conference, Toronto, Canada.
- Bosnyak DJ, **Gander PE**, Roberts LE (2006, October) Does auditory discrimination training in nonmusicians modify representations in both primary and secondary auditory cortex? Poster presented at the Society for Neuroscience conference, Atlanta, USA.
- Bosnyak DJ, **Gander PE**, Roberts LE (2006, August) Does auditory discrimination training in nonmusicians modify representations in both primary and secondary auditory cortex? Paper presented at the International Conference on Biomagnetism, Vancouver, Canada.
- Bosnyak DJ, Stevens S, **Gander PE**, Roberts LE (2006, August) Phase dynamics in the 40Hz auditory steady state response. Paper presented at the International Conference on Biomagnetism, Vancouver, Canada.
- Bosnyak DJ, **Gander PE**, Shahin A, Roberts LE (2005, September) The neuroplastic P2 and other evoked responses of the human auditory system. Paper presented at the Society for Psychophysiological Research conference, Lisbon, Portugal.
- Roberts LE, Bosnyak DJ, Shahin A, **Gander PE** (2005, July) The neuroplastic P2 and other evoked responses of the human auditory system. Paper presented at the Canadian Society of Brain, Behaviour, and Cognitive Science conference, Montreal, Canada.
- Bosnyak DJ, **Gander PE**, Roberts LE (2005, July) Electrophysiological investigation of frequency integration in human auditory cortex. Poster presented at the Canadian Society of Brain, Behaviour, and Cognitive Science conference, Montreal, Canada.

- Roberts LE, Bosnyak DJ, **Gander PE**, Trainor LJ (2005, June) Development of the 40-Hz auditory steady state response from childhood to late adolescence. Paper presented at the Lake Ontario Auditory Neuroscience conference, Hamilton, Canada.
- Bosnyak DJ, Roberts LE, **Gander PE** (2005, June) Electrophysiological investigation of frequency integration in human auditory cortex. Paper presented at the Lake Ontario Auditory Neuroscience conference, Hamilton, Canada.
- McDonald JJ, Visser TAW, **Gander PE**, DiLollo V (2002, November) Electrophysiological evidence for selective target processing in visual search. Paper presented at the Psychonomic Society conference, Kansas City, USA.
- McDonald JJ, **Gander PE**, Visser TAW, DiLollo V (2002, June) Electrophysiological evidence for selective target processing in visual search. Poster presented at the Canadian Society of Brain, Behaviour, and Cognitive Science conference, Vancouver, Canada.

## **CAMPUS/DEPARTMENTAL PRESENTATIONS (5)**

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- Gander PE** (January, 2016) Intracranial mapping of a tinnitus system. University of Iowa, Pappajohn Biomedical Institute, Best Paper Competition, Iowa City, USA.
- Gander PE**, Sedley W, Kumar S, Oya H, Kovach CK, Nourski KV, Kawasaki MA, Howard MA, Griffiths TD (2014, April) How tinnitus invades the brain: direct recordings of the cortical tinnitus network. Poster presented at the University of Iowa Health Sciences Research Week Poster Session, Iowa City, USA.
- Gander PE**, Kumar S, Nourski KV, Howard MA, Griffiths TD (2013, June) Human depth electrode recording of auditory cortex responses to different pitch values. Poster presented at the Iowa State University, Postdoctoral Research Day, Ames, USA.
- Gander PE**, Bosnyak DJ, Roberts LE (2009, June) Attention modulates the amplitude and experience the phase of the 40-Hz auditory steady state response. Poster presented at the Manchester Neuroscience Research Institute meeting, Manchester, UK.
- Gander PE**, Bosnyak DJ, Wolek R, Roberts L E (2005, May) Attentional modulation of the 40-HZ auditory steady state response and other auditory evoked potentials during acoustic training. Poster presented at the CIHR Poster Reception, McMaster University, Hamilton, Canada.

## **TEACHING EXPERIENCE**

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| 2016      | <b>Guest lecture</b> , Biology –Neuroscience Seminar, University of Iowa                             |
| 2011      | <b>Guest lecture</b> , Psychology – Cognitive Neuroscience of Attention, Nottingham Trent University |
| 2007      | <b>Guest lecture</b> , Psychology – Neuroscience Seminar, McMaster University                        |
| 2006      | <b>Guest lecture</b> , Psychology – Abnormal Psychology, McMaster University                         |
| 2003-2008 | <b>Teaching Assistant (9 courses)</b> , Psychology, McMaster University                              |
| 2002-2003 | <b>Teaching Assistant (2 courses)</b> , Psychology, Simon Fraser University                          |

## RESEARCH EXPERIENCE

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- 2001-2003      **Electrophysiology Technician/Research Assistant**, Psychology, Human Electrophysiology Lab, Simon Fraser University
- 1998-2001      **Research Assistant**, Psychology, Mental Health, Law and Policy Institute, Simon Fraser University
- 1997              **Research Assistant**, Psychology, Memory Lab, Simon Fraser University

## SUPERVISORY EXPERIENCE

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- 2011-2016      **Co-supervisor**, PhD – Mr Jeff Davies, Hearing Biomedical Research Unit, University of Nottingham
- 2013-2015      **Graduate Committee Member**, AuD – Ms Jaelyn Utz, Department of Speech and Hearing Science, University of Illinois at Urbana-Champaign

## EXTRACURRICULAR SERVICE

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- 2014              **Conference chair**, 1<sup>st</sup> Annual Midwest Postdoctoral Forum Symposium, University of Iowa.  
Organized conference for 100 attendees (across 5 universities); budget \$6,000.

## SERVICE TO PROFESSION

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**Doctor of Audiology thesis examination**, University of Auckland.  
**Reviewer of grant applications**: Neurological Foundation for New Zealand

## COMMUNITY SERVICE

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- 2004-2008      McMaster University Brain Bee  
Assisted organization and tutored local winners for competition in National and International Bees, including one National Winner.

## PUBLIC ENGAGEMENT

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**Gander PE** (2017, March) Live research discussion. Iowa Public Radio.  
**Gander PE** (2017, March) Live research discussion. Wisconsin Public Radio.  
**Gander PE** (2017, March) Research discussion. CBC Radio.  
**Gander PE** (2015, September) Research discussion. Sirius/XM Doctor Radio.  
**Gander PE** (2015, May) Research discussion. Radio-Canada Montreal.  
**Gander PE** (2015, May) Research discussion. Finish Broadcasting Company radio.  
**Gander PE** (2015, April) Research discussion. Sirius/XM Doctor Radio.

**Gander PE** (2015, April) Research discussion. Freelance reporter Angus Chen.  
**Gander PE** (2012, March) Research discussion. Radio Swindon, UK.  
**Gander PE** (2012, March) Research discussion. Preston FM, UK.  
**Gander PE** (2012, March) Research discussion. BBC Bradford Radio, UK.  
**Gander PE** (2012, February) Research discussion. Tinnitus Awareness week. King's Mill Hospital, Sutton-in-Ashfield, UK.  
**Gander PE** (2011, May) Tinnitus support group discussion. BBC Radio Nottingham, UK.  
**Gander PE** (2011, April) Research discussion. Nottingham tinnitus support group, UK.  
**Gander PE** (2011, March) Research discussion. Chesterfield tinnitus support group, UK.  
**Gander PE** (2011, January) Research discussion. BBC Radio Scotland, UK.  
**Gander PE, Hall DA** (2010, April) Tinnitus research showcase. University of Nottingham Community Open Day.  
**Gander PE, Hoare DJ, Collins L, Smith S, Hall DA** (2010, February) A survey of tinnitus service provision in English Audiology departments. Nottingham tinnitus support group, UK.  
**Gander PE, Hoare DJ, Collins L, Smith S, Hall DA** (2010, February) A survey of tinnitus service provision in English Audiology departments. Chesterfield tinnitus support group, UK.  
**Gander PE** (2009, December) Tinnitus research discussion. BBC Radio Nottingham, UK.  
**Gander PE** (2009, December) Tinnitus overview. Public tinnitus lecture. Nottingham, UK.

## PROFESSIONAL AFFILIATIONS

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2006-present Society for Neuroscience  
2013-present Association for Research in Otolaryngology  
2009-2012 British Tinnitus Association  
2006-2007 Canadian Association for Neuroscience

## PROFESSIONAL ACTIVITIES

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2014-2015 **Co-chair**, Midwest Postdoctoral Forum  
2013-2014 **President**, University of Iowa Postdoctoral Association  
2012-2013 **College of Medicine Representative**, University of Iowa Postdoctoral Assoc.

## AD HOC REVIEWER

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Human Brain Mapping, Journal of Neurophysiology, Hearing Research, PLoS One, Frontiers in Neuroscience, Frontiers in Auditory Cognitive Neuroscience, Frontiers in Psychology, Frontiers in Aging Neuroscience

## REFERENCES

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